

I caught this piece without any difficulty and crushed it; from its measurement by the instrument, however, I was convineed its size was not too great to prevent its discharge through the urethra without being broken. During the day Mr. R. voided several small fragments, and in the evening he deelared that he experienced no pain after passing the urine. I now sounded him, and could not detect any stone remaining. On the 21st inst. he told me he could retain his urine four and five hours. Dr. Kirkbride and myself sounded him very carefully this day, but could not find any fragment. On the 24th of July Dr. Physick had the kindness to sound his bladder very carefully, and expressed his belief that it was entirely free from stone. Two days subsequently Mr. Reynolds was sounded by my friends, Drs. Peace, Johnson, and West, who concurred in this opinion.

The stone was analyzed by Dr. Johnson, who pronounee it to be an oxalate of lime.

Philadelphia, August 23, 1836.

ART. IV. *Topographical and Medical Sketches of Mobile for the year 1835.* By J. WIGGINS HEUSTIS, M. D.

The importance of medical topography, or a desription of the situation, climate, air and water, of any given place, towards a correct knowledge of the diseases prevalent therein, was duly appreciated and aeknowledged by that accurate observer and faithful delineator, Hippocrates, the father of our profession. Considering the infaney and imperfection of medical science at that time, we are surprised that an individual, with little more than the unaided strength and diserimination of his own native intellect, should have embodied so many valuable faets, and made such important deductions, as at once to elevate the profession from a state of nature to that of a science, challenging the respect and receiving the admiration of mankind. Had every physician of superior endowments possessed half the zeal, and exercised half the industry of this gifted and worthy disciple of *Æseulapius*, we can scarcely imagine the progress which the healing art would have made in its ascending march towards human perfectability. Whether the mind of man, in the lapse of successive ages, has degenerated with his stature, may be a subjeet for the speculative casuist to investigate and determine. It would appear, however, that our negligence in improvement increases with the augmented facilities

of its attainment. Books and periodicals are multiplied without end, but how small is the proportion that read even a moiety of the productions that are constantly issuing from the teeming press? When books were made, published, and perpetuated with the pen alone, nooe but those of esteemed merit and sterling worth received the honour and labour of a seeond edition. The masters and fathers of literature were conned and studied with devotion, and not read with that hasty glaneing that distinguishes the heterogeneous medley of superficial learning of the present day.

With these preliminary remarks, for which I erave indulgencee, I hasten to the eonsideration of my subjeet.

The city of Mobile is comparatively of reeent growth. While in possession of the French and Spaniards it was a small, poor, trading establishment, surrounded by savage tribes, who resorted there for spirits and tobacco, and a few other artieles of traffic; and for several years after it eame into the possession of the United States it remained almost stationary, as it regarded growth and improvement. About the years 1818 and 1819 it was seriously believed that Blakely would entirely supersede the town of Mobile. The situation of the former plaee appeared every way more advantageous and desirable; it was of more easy aeeess by shipping, the site was high, romantically undulating, and abounding with never failing springs of the purest water gushing from the sloping acclivities. A spirit of commereial enterprise and speculation was enlisted in its favour, and it appeared to be fast rising in interest and importanee, bidding fair to beeome the emporium of one of the wealthiest States in the Union. But in the heyday of its opening prosperity it received a sudden and fatal reverse. The *yellow fever*, as it was then ealled, that dreaded scourge of our southern sea-ports, spread death and destruction through its streets; and the town that was lately full of people suddenly beeame as a widow, weeping in lonely desolation over her deserted habitatiuns.

About the year 1825 the prospects of Mobile began to brighten. As the fertile lands of the interior were brought more and more into cultivation with every succeeding year, wealth and commerce began to flow hither in an invigorating stream, and within the last two or three years it has far outstripped the most sanguine caleulations. Numerous and vast fortunes have been made by investments in real estate, and such is the rage and ardour of speeulation, that property is constantly ehanging hands. The eyes of strangers were, therefore, direeted to Mobile, as a plaee every way calculated to mend and make their fortunes, and the tide of emigration has set in with such an overflowing impetus and volume, that no places were left for its

accommodation. Boarding, house-rent, and provisions became extravagantly high, and many persons, in moderate circumstances were, in consequence, compelled to return to their former places of abode, or to seek other situations. Nor has there been any scarcity of professional gentlemen of all classes and descriptions; so that a physician or lawyer is compelled to pay a considerable portion of his income to obtain an office of the smallest possible dimensions. The present population is probably about ten thousand, and the proportion of physicians appears to be about one to every two hundred and fifty or three hundred inhabitants, rich and poor, black and white, upon an average. Law is equally abundant, and invites you with gilded characters at almost every door. And such is the state of litigation and the uncertainty and doubtfulness of titles, that the members of the bar have found excellent picking, and have fattened immensely on the spoils.

As to the population, like other sea-ports, it is a mixture of almost every class, genus, and species of the human race; among which there is a very considerable spice or sprinkling of the prolific offspring of the Emerald Isle. There is, moreover, what is called the *Creole* portion of the population, strictly speaking, the natives of the place, but here more exclusively applied to the mixed multitude, descended from the ancient inhabitants, crossed, mingled and mongreled with the negro blood, so as to present every shade, colour, and complexion, from the sooty descendant of Africa, with his flat nose, thick lips, bony legs, projecting heel, and high-set calf, to the bright brunette, with her straight black hair, sparkling eyes, and vermil lip. There are also among the Creoles some respectable families, unmixed with the negro race. This portion of the population possess manners and customs peculiar to themselves in religion, diet, education, and modes of life, varying in style according to the wealth and circumstances of the persons. One peculiarity is their fondness for garlic, which enters largely into their soups, stews, and ragouts, and appears to be an indispensable requisite to give a zest and flavour to the delicacies of the table, and which is considered, moreover, as highly conducive to health, either in neutralizing the miasms, or in keeping up the action of the exhalents, or by producing a counteracting impression stronger than those of the various miasmata; perhaps in the same way as the scent and society of goats, or the pungent smell of a sheep fold in the morning, upon an empty stomach, is said to act as a disinfection, and to keep off and prevent pestilential diseases.

This amalgamation of the white and coloured races has progressed with considerable rapidity, and is now in as prosperous a state of suc-

cessful experiment as its warmest advocates can possibly desire; so that the ringed, streaked, and speckled are rapidly merging their national peculiarities and distinctions; and assuming the bright, rich, and mellow tint of the autumnal foliage. These observations are not intended to cast any disparagement upon the respectable portion of our Creole population, which embraces many families of the first standing in society, whose wealth, character and influence secure to them the esteem and confidence of the people. Nor is it intended, by this, to draw any unfair and invidious distinction; and I merely give these particulars as historical facts, so far as they possess a relation to medical topography.

The portion of the state bordering on the Gulf of Mexico, for many miles into the interior, appears to be an alluvial formation of comparatively recent date;* and there can be no doubt but that at some former period the bay of Mobile extended as far up as the junction of the two rivers, the Tombigby and the Alabama, and from Mobile to Blakely. The intervening islands appear to be of still more recent growth, formed by the accumulation of drift wood, and the gradual deposite and accumulation of earth and soil, brought down by the yearly and frequent floods. This work is still constantly progressing, and may be seen in the increase of the low marshy islands in the vicinity of the city; and the probability is, that should the world stand a few centuries longer, the entire bay will be filled up, with the exception of the channel for the egress of the river. The islands between Mobile Point and New Orleans have, doubtless, been formed by the rivers on the one side, and the tides of the ocean on the other, washing up and depositing sand and shells, forming a barren soil, fit only for the growth of the pine and other plants that shun the verdant hills and fertile plain, and delight in sterility and desolation.

The last high land on the Alabama is at Claiborne, about one hundred and fifty miles above Mobile. About a year since, on landing and ascending the bluff by a winding road that led up to the village, my attention was arrested by an unusual collection or deposite of marine shells, embedded in the bank that formed the boundary of the road, where the latter had been lately dug out and repaired. Many of these were entire and perfect,—a heterogeneous assemblage of great variety. Such things, I know, are frequently met with, and yet, notwithstanding their frequency, one can never view them without feel-

*One of our citizens, who lives on an eminence in the vicinity, in digging a well, after going through strata of clay and sand, at the depth of about twenty-five feet, came to marsh mud, containing portions of trunks of trees, limbs, leaves, ferns, &c., in a state of considerable decay.

ing his mind strongly impressed with wonder and admiration, as he reflects upon the astonishing changes and revolutions that have taken place in this planet which we inhabit.

The more hardy of the tropical fruits, the fig, here flourishes in great perfection, but the more tender, as the cocoanut, the various species of the citrus, the inusa, &c., sustain but a forced and precarious existence; and it is remarkable that not only in Europe and Asia, but also in South America, these desirable plants should flourish in as high a latitude as thirty-five, whilst in our climate they will not succeed in the latitude of thirty. It would seem that our arctic region possesses a greater intensity of cold in its icy bounds, than any other portion of the globe; and not unfrequently, its piercing breath pours down in bitter blasts from one extremity of our country to the other, greatly mitigated in its intensity, however, before it reaches our southern confines.

I have, in a preceding number of this work, treated of the climate of the middle section of the State of Alabama, to which little need here be added. As Mobile, however, is nearer to the ocean and to the Gulf Stream, and withal about two degrees further south than the latitude of Cahaba, the climate, in winter, is milder than that of the latter; and in summer the air is delightfully tempered during the day by the sea-breeze, which sets in with great regularity, almost daily, between nine and ten o'clock. At this season, however, in that portion of the city near the water more particularly, there is a considerable drawback on domestic happiness and enjoyment, from the annoyance of the mosquitoes, which begin to make their appearance in April, and continue more or less numerous until the month of November. Of these, there are three or four species, some of which are our assiduous attendants during the hours allotted to repose, whilst others, less sensitive to the solar light, sport in the day; and to the female portion of the population, from their sedentary mode of life, are exceedingly annoying: so that it is not unusual to see a small black servant assiduously employed in protecting her mistress from the stings and bites of these troublesome and venomous insects. Venomous they unquestionably are, as every person who has been bitten by them can affirm; and both in children and adults I have known them frequently to occasion obstinate and painful ulcerations of the lower extremities.

The past winter, 1835 and 1836, has been remarkably mild, the thermometer, for the most part ranging from 55 to 75, from 9 A. M. to 6, P. M., and seldom sinking to the freezing point, on which account the season has been remarkably favourable to phthisical pa-

tients, several of whom I have known materially improved in health by coming from the inclement region of the north to this more favoured latitude. Whilst others, fearful of risking the vicissitudes of the season, have sought the balmy and vernal winters of Havana and Key West, with great relief and benefit to their frail and shattered constitutions. The benefit here spoken of, however, is for the most part confined to the early stage of the disease, and before ulceration has made any considerable progress. It is much to be regretted that when all the assiduity of tenderness and friendship, and all medical skill and attention has failed, and hope itself has almost expired, that the unhappy patient should then set out on a pilgrimage of health to a distant land, with the soul-subduing and melancholy consideration that, in all probability, he must die amongst strangers, far from his relatives and friends, and the soothing endearments of home. Such, unfortunately, has been the fate of many, and many, too, of the most valuable and interesting of our citizens and friends, who had too long deferred their migration to a warmer climate.

The month of March is here often blustering and cold, and it not unfrequently happens that there is more cold weather this month than in any other of the whole year; the thermometer not sinking so low as in the months of January and February, but altogether a greater amount and aggregate of cold and disagreeable weather, in which the mercury frequently falls to the freezing point, with a sharp wind from the north and north-west.

As the site of Mobile is but little elevated above the level of the bay, the well water is warm and brackish. The city, however, is tolerably well supplied with good water, brought in log trunks from Spring Hill, a distance of five miles. The water of the source has an elevation of about four or five feet above the level or highest part of Mobile; and by raising a greater head it is thought that there can be obtained an abundant supply for the whole city. After being brought to the town, it is conveyed through the streets in iron pipes, from which each house is supplied by paying a dollar per head by the year. From the iron pipes the water is conducted to the different lots in leaden tubes. It has been thought by many, and by some of our physicians, that these leaden pipes impregnate the water with a poisonous quality, in consequence of the corrosion of the metal from the action of the water upon it. But as the air is excluded, it is contrary to chemical laws for any solution to take place, without previous oxydation, from contact with atmospheric air. Moreover, the city of London is supplied with water by the same description of tubes, without the suspicion of any injurious effect. It so happened, however, that there was

an unusual prevalence of bilious colic in the spring of 1835, and the same disease also prevailed this year, but to a less extent, and many were willing to attribute it to the leaden pipes; but the symptoms of lead colic and of any other species of that disease are so dissimilar and distinct as to admit of easy discrimination; so that none but the most careless observers, or physicians of the most limited experience and observation, could mistake the bilious for the lead colic.

The soil of Mobile, for the most part, is sandy and dry, with here and there a few intervening wet places. On the northern side of the city, however, the land is wet and swampy, consisting of a soft black mud, apparently without any solid foundation. This description of land extends up the river, for the distance of nearly two miles. But, notwithstanding its forbidding appearance, the growth and improvement of the town, are extending principally in this direction. Streets are opening through this black morass and up the river with rapid strides, although much labour and expense will be required to properly drain, graduate, and fill up this portion of the city, so as to render it dry, pleasant and healthy; until such improvement shall be made, persons residing there throughout the year, will be liable to the different grades of bilious, or endemic fever, of either the intermitting, remitting, or continued type. As the new streets are opened and built up, they are graduated so as to carry off the water to the natural drains and branches, and then receive a coat of cockle shells four or five inches in thickness. This soon forms a firm, smooth, and solid road; but, in a few years, the surface becomes ground up into a fine impalpable powder, forming in the dry hot weather of summer, a light subtile dust, penetrating the most secluded recesses of the houses; and, in wet weather is converted into a thin sloppy mortar, the hardened crust beneath of shell and lime being impermeable to the water, and that portion which does not run off, incorporates with the pulverized shells, and forms an extremely muddy and disagreeable surface. These shells, with which the streets are covered, are found in vast beds in and upon the river banks. As before remarked, the bay, and, of course, the salt water, formerly extended up to the junction of the Tombigby and Alabama; and the animals of these marine exuviae then inhabited their native and proper element, but the encroachment of the land, and filling up of the bay, has gradually destroyed these testacea, so that nothing now remains but these accumulated relics of former generations.

Among the plants and shrubbery with which the marshes abound, is the showy and beautiful *Gordonia*, with its large white blossoms,

in thick and countless profusion. The *Bignonia catalpa*, with the local nativity of which Mr. Nuttal expresses himself unacquainted, here grows spontaneously, in undisturbed seclusion upon the river banks. The country is rich in botanical treasures, and many new genera are yearly brought to light by the lovers of this interesting and delightful study.

From the middle of the city, extending down the bay for several miles, the country is dry and sandy, producing little else than the long leaved pine, with the exception of a few slips of hummock upon the bay, agreeably diversified with the *Cornus*, *Halesia*, the different species of *Magnolia*, &c. The coast bordering upon the bay is considered unhealthy, and experience proves that it is so to a considerable degree, as the sea-breeze, which sets in every day, blows over a quantity of decaying drift-wood and other perishable matters, cast upon the shore by the wind and tide. The centre of the city and that portion extending out towards Spring Hill, to the distance of seven or eight miles, is healthy; more especially Spring Hill, which is dry and elevated, entirely free from all stagnant water, and its accompaniment, mosquitoes; persons resorting there and resident inhabitants, enjoying, at all times, the best of health. Upon the whole, Mobile may be considered a healthy place, and probably more so than almost any other portion of the state, as a comparison of several years appears clearly and satisfactorily to confirm.

During the hot months of summer, from the 15th of May to the 15th of September, about an average degree of temperature would be from 76 to 80, at night, and 86 to 88, from 10, A. M., to 6, P. M. In a work formerly published, I have taken some pains to show the temperature of different climates, seasons and situations, peculiarly liable to bilious or yellow fever, and have there come to the following conclusions:—"That a range of temperature from 70 to 86 of Fahrenheit, is necessary to the production of the bilious endemic, or yellow fever; that the temperature should not fall much, if any, short of 70 at night, nor of 86 in the heat of the day. But it may be remarked, that the higher the natural temperature of the atmosphere, provided it is not sufficient to dissipate moisture, the greater the putrefaction, and the more sickly the season; always bearing in mind, however, that a greater degree of heat will compensate for a deficiency of corruptible materials, and an excess and abundance of the latter will be equivalent to a greater degree of the former."* It will be seen

*Medical Facts and Inquiries respecting the Causes, Nature, and Cure of Fever, p. 39.

from this, therefore, that in our southern climate, we always have a temperature, during the summer months, sufficiently elevated for the production of bilious or endemic fever; and that all that is necessary for its prevalence is a concurrence of other causes favourable to its origin, and these, as just stated, are a certain degree of moisture and amount of corruptible animal and vegetable substances. Hence the necessity of strict and particular attention to cleanliness in our cities, and to having them properly drained, so that as little stagnation and putrefaction may take place as possible. But, even with the greatest care and precaution, sickness, and even pestilence will frequently prevail in the best regulated communities, and set at naught man's puny efforts to foresee and counteract the causes and origin of disease.

I think it has generally been found that the suburbs and outskirts of a city are more unhealthy, during the summer months, than the more central and thickly populated portion of the town; at least, such appears to be the fact in Mobile; and for this one or two reasons may be assigned. First, the suburbs and outskirts being but little or imperfectly improved, suffer from stagnation of water after rains, which, standing in holes and low places, soon undergoes fermentation from exposure to the summer sun. Secondly, it is probable that the smoke of the more thickly inhabited portion may have a considerable effect in correcting or neutralizing the unwholesome damps and miasmata existing in the atmosphere.

The predisposition most favourable to the production of bilious fever is a constitution unaccustomed to the climate. Thus, persons from the northern and eastern states seldom escape an attack of fever during the first summer of their residence here. And the same observation applies, in some degree, to persons from other of the Southern States, and even from the interior of our own, owing probably to a certain peculiarity of the air and water, which, although in general congenial to the acclimated, is unfavourable to the new emigrant. But, although long residence and acclimation are the best securities for health, they confer no certain exemption and immunity from disease; and our autumnal bills of mortality are yearly augmented by the names of old and respectable inhabitants, who have fallen under an attack of our annual epidemic. It is greatly to be regretted, however, that the destructive vice of intemperance comes in for so large a share of votaries and victims. The numerous grog-shops, groceries, bar-rooms, and places of retailing ardent spirits, from the most loathsome sinks of drunkenness and depravity to the higher order of hotels and public boarding houses, afford a striking and lamentable illustration of the vast extent and prevalence of the use and abuse of this

pernicious and demoralizing article of traffic—worse poison to the souls and bodies of mankind than all the native drugs, either of the mineral or vegetable kingdom. True, I have known a few instances where many years of successful perseverance in habits of intemperance has been followed with comparative exemption from any actual disease, at the same time that the entire system was bloated and crimsoned with the inflammable materials, and the whole of the swollen mass probably so combustible, as to render the blowing out of a candle an extremely dangerous experiment, and which might be instantly followed by the violent explosion of this living and portentous alembic. In the majority of instances, however, its effects are more sudden and destructive. Instead of arriving at the drunkard's elysium, fictitious and rubicund health, swollen and purpled complexion, and enlarged and porpoise-like dimensions, the unhappy debauchee becomes shrunk, pale, and withered. The over-stimulated nerves and organs cease to perform their proper functions, and the poor, weak, and unresisting votary of Bacchus soon becomes his victim. From my own observation, I think one fact is satisfactorily established, which is, that in persons accustomed to the intemperate use of ardent spirits, all acute diseases are remarkably rapid in their progress, and often fatal in their termination. But I must forbear to enter further upon the consideration of this subject, deeply interesting as it is to the moralist and physician, and addressing itself, as it does, by its bearings and effects upon the social relations, to the best feelings and sympathies of our nature. As it would be visionary and utopian to hope to eradicate vice from human society, so the physician who lives upon the luxury, dissipation, and refinement of others, and the numberless ills, accidents and calamities that flesh is heir to, can only prescribe for disorders as he finds them, from whatever cause they may arise, and endeavour to remove or mitigate disease, and soften the bed of wretchedness and pain.

The year 1835, in the main, might be considered as healthy, although a number of deaths occurred in the spring among children from the scarlatina anginosa. As there was little peculiarity in this disease different from what has already been laid down in medical authors, it is perhaps unnecessary to dwell upon it. I would, however, remark, that in most cases there was a great prostration of the vital forces, with a small and frequent pulse, considerable swelling and inflammation of the throat and neighbouring glands, and corresponding difficulty in deglutition, for the removal of which local symptoms, epipastics, applied in time, were of the most signal service—where the inflammation was less, the volatile liniment was sufficient. I would

further observe in relation to the treatment of this disease, that as far as my information and experience extended, calomel was a pernicious medicine, appearing to aggravate every symptom, and to depress still lower the flagging energies of the system. I never exhibited more than a single dose, and that at the commencement, and in combination with one or two grains of ipecacuanha.

The next disease in the order of time was the bilious colic; at which time, as also antecedent to its prevalence, diarrhoea prevailed, attended in several instances with strongly marked symptoms of cholera. A few cases also of real cholera occurred, though principally on board the steamboats and among the crews, whose life is one continual state of exposure. More deaths took place from the bilious colic than from the bilious fever, which succeeded it as an epidemic. The disease, unless speedily relieved, was prone to run into and occasion arteritis. The only fatal case that occurred in my practice was that of a man who had been sick eight days before I saw him, and in which the spasm and constipation had never been removed, and where tympanitis and inflammation, on the verge of sphacelus, already existed. Previously to his death the bowels appeared to become more permeable, and several dark bilious and offensive discharges took place; but from subsequent appearances this was merely the consequence of the relaxation attendant on incipient mortification and general extinction of the muscular forces: and yet the symptoms appeared to be considerably relieved by these operations, so that hopes began to be entertained of his recovery. He died on the seventh day of my attendance. Permission was granted to open the body. On dissection, the whole alimentary canal, with the exception of the stomach, appeared to be completely disorganized: there were no traces of blood vessels. In many places the bowels were united to the peritoneal lining of the abdomen, and the different convolutions to each other. The whole anterior and lateral portions of the abdomen were covered by the colon, which was enormously enlarged and distended with flatus, and of a black, blue or carbonaceous colour. The intestines themselves were tender and easily lacerated, and, in sundry places, perforated with holes; but as they were in close contact with the parietes of the abdomen, effusion did not, probably, take place to any extent during the life of the patient. The stomach and the inferior portion of the colon were the least diseased. Considerable collections of pus were found in the cavity of the abdomen. The intestines contained a large accumulation of dark greenish and extremely offensive matters. The lower portion of the colon was small and contracted, as high up as the sigmoid flexure. The liver was much enlarged, and its right

and inferior portion of a dark mahogany colour, and very tender, the fingers penetrating it with little force. Notwithstanding the inflammation had run so high, there had been but little complaint of pain from the period that I first saw him, nor was there any or very little tenderness on pressure; nor, except occasionally, where the distention was very great, was there any distress, showing that high inflammation of the bowels may exist without betraying itself by tenderness or pain.

My practice in this disease was first to relieve the spasm and pain by anodynes and the warm bath, if inflammation had not already taken place. If inflammation and fever had come on, copious bleeding was resorted to; although in the use of the lancet here, as in every other instance, the extent should be carefully adjusted to the constitution, effect, and other circumstances of the patient, as for want of proper attention to these things I have known the strength and pulse to sink almost beyond the power of recovery. In the use of anodynes, however, less caution appears to be required, as I have never known any permanent injury or serious effects produced by them, although I have frequently given as much as an ounce of laudanum to a patient in the course of a short time, either by itself or in combination with other stimulants and antispasmodics; but wherever it has been necessary to give it to any considerable extent, by way of precaution I have generally added an emetic, either of white vitriol or ipecacuanha, to cause it to be rejected as soon as relief might be obtained. As an anodyne, however, of great power, I often had recourse to tobacco; two drachms, boiled in a pint of water, made a safe and often an effectual enema, relaxing and relieving the spasm and pain, and operating as a speedy cathartie.

As in every other disease, so in this, calomel was generally exhibited with considerable freedom; in this instance, however, I can say but little in favour of its boasted virtues; and it is to be feared and regretted that in this, as well as other diseases, so many, after being relieved from the symptoms of the original disease, die from the effects of salivation, or from inflammation and gangrene of the mouth and fauces, and from mercurial fever. Cases of this description have doubtless often fallen under the notice of every practising physician, affording him melancholy occasions to lament over the misdirected skill and the failure of his profession. It has been my fortune to witness, as most physicians have who have been long engaged in their profession, all the varied forms of practice, from that of the most rational and judicious, to the nostrums of old women, the impositions of quaeks, and the absurdities of those patent man-killers,

the Thompsonians, so that accident has frequently thrown into my way the unfortunate victims of calomel, who had been treated with all the liberality that even Dr. James Johnson himself could desire or recommend.

The objection to the use of calomel in bilious colic, and indeed in colic of any kind, is that before it can exert any specific effect over the disease the patient may die from pain and inflammation, or from a sudden collapse of the powers of life, if the onset has been violent. Besides if, as the name of the disease implies, the biliary system is already in a state of preternatural excitation, what can be the object of its exhibition? Will it be contended that it is to subdue and regulate this morbid action, and to bring it to a normal state? The operation and effects of this article must be truly wonderful in possessing this omnipotent power and control over the condition and functions of the liver, that if its action is impeded it can quicken and arouse it to a healthy grade, and if it is too highly excited it possesses an equal power to subdue it. But, admitting that it operates in all these modes, and in every other possible variety of way that its most sanguine advocates contend for, here is a violent spasmotic affection of the bowels, which, if not speedily relieved, will soon bring on fatal inflammation, and it is highly probable that a degree of inflammation is cotemporaneous with the formation of the spasm. Will calomel act as an antispasmodic, or subdue inflammation by its direct application to the inflamed surface? Oh, no; but it will relieve the congestion of the liver, counteract and control its morbid action, and carry off the bile. But before this can be accomplished by the power of calomel the patient is placed *hors de combat*, and sinks to rise no more. But so far is the operation of calomel from exerting any salutary control over this disease, that death takes place even after salivation has been fairly established, and to which fatal termination this medicine has, doubtless, frequently and essentially contributed.

It was remarked above that this disease was prone to run into inflammation, to counteract which, as well as for the purpose of relaxing the spasms, the warm bath was of essential service; and, indeed, when all other remedies have proved ineffectual in affording ease, I have scarcely ever known this to fail in procuring at least temporary relief from suffering and pain. The remedy of course was repeated as often as the urgency of the symptoms required.

As answering the same indication, cupping was also a valuable remedy. I have repeatedly procured immediate relief by the exhibition of an anodyne, and two or three applications of White's cupping

apparatus over the seat of the disease. The relief afforded by cupping is almost immediate, and often permanent.

In the treatment of this disease drastic purgatives should be carefully avoided, as they serve only to aggravate the disease, and the reason is sufficiently obvious; and, indeed, I have known a relapse produced by the use of an active cathartic, taken for the purpose of removing constipation, in the progress of convalescence. Here, then, the spasm was produced after the faecal contents of the intestines had been effectually removed, and that by the mere action of the purgative upon parts still in a weak and irritable state. Now, according to the purgative doctrine, here was again a necessity for a repetition of the cathartic, and yet the disease yielded by the use of anodynes, cupping, and the warm bath, followed by a moderate dose of sciuia and manna. It is in vain that we attempt to bore a passage through the bowels with calomel and jalap, or any other medicine of this class, while the alimentary canal is in a state of spasm and inflammation: these morbid states removed, the disease becomes effectually relieved, and the intestines again resume their healthy function without the employment of any violence or force. These are truths so perfectly obvious and plain, that it might be considered strange they should be overlooked or disregarded, and yet how seldom are they taken into consideration? The language is, "if a passage could only be procured the patient would be safe;" and calomel, jalap, castor oil, and a host of articles are given in rapid succession and with indefatigable zeal. True, their mischievous effects are often at the same time counteracted by the use of the lancet and the warm bath, but still the plan of calomel and purging is never intermitted, and if the patient survives, great praise is awarded to the physician for his skill and success, when in reality unassisted nature would in all probability have accomplished the object with more expedition and safety. In fact, the disease must be of an anomalous character, and such as in the course of a long practice I have never met with more than once or twice, that will not yield to antispasmodics and the warm bath, cupping, enemata, and mild laxatives. I have seen the symptoms of cholera, rice water discharges, spasms of the limbs, attended with torpor and coldness, and a pulse scarcely perceptible, suddenly arrested by a single exhibition of a liberal dose of opium, camphor and calomel. Whether the addition of the calomel was of any essential service, I am unable to say; perhaps its salutary effect, if any it possessed in such cases, may be accounted for on the principle of the homœopathist, that *similia similibus curenur*, of which numerous examples are adduced by Dr. Hahnman, the author of this strange

and seemingly visionary system. It is well known, however, independently of all theory, that calomel possesses the power in many instances of tranquillizing the morbid action of the stomach. I am willing to allow all due credit to calomel as a useful and valuable medicine when given with proper discrimination, and it is only the abusive extent to which it is frequently carried that I censure and condemn. A strong objection to the continued and free use of calomel in bilious colic, and indeed in any species of this disease, is that, without possessing any control over the complaint, salivation is apt to ensue before the regular peristaltic motion of the bowels can be established; but even if this event should not happen, dependence upon it is leaning upon a broken reed; and if, unfortunately for our repose, there should remain any sensibility, sympathy and feeling in our nature, it will be almost certain to disappoint our hopes and to wound our peace. Too often has the physician just occasion for regret that his best effects prove unavailing, although judiciously and properly directed; but when death ensues from any neglect, mismanagement, or other impropriety on his part, his reflections must be painful in the extreme. I can speak feelingly and from the self-experience of younger years, but I trust that I have profited by the lessons of my former life, and have gathered useful and enduring instruction from former accidents and misfortunes.

A resort to calomel is often the refuge of ignorance and incompetence. When the physician is doubtfully and despondingly sitting at the bed-side of a patient, whose life appears to be trembling, as it were, upon a needle's point; and when his wandering thoughts have become lost and bewildered in uncertainty and doubt, how pleasant to call home the scattered ideas, and concentrate and anchor them in that sure and safe repose, calomel! How admirably convenient, too, for the young physician, scarcely shooting the pin-feathers of his profession, who, although not doubly armed for life or death, like the unfortunate John Brown with his opium and lancet, yet with this single club of Hercules—this jaw-bone of Sampson—this lever and fulcrum of Archimedes—he considers himself fully competent to slay the many-headed monster, to discomfit the ranks of opposing hosts, and to turn and overturn the little world around him.

About the middle of May, the fever began to make its appearance. In most instances, it was of rather a mild character, and yielded without difficulty to proper treatment. The type was generally that of the remittent, although many cases were of the continued form, particularly in strangers, attended with severe pain in the head and back.

In some, the disease assumed the form of the malignant intermittent, in which, towards the termination of the paroxysm, there would occur great weakness and prostration of the system, with a pulse small, thread-like, and scarcely perceptible, at the same time that the brain and intellect were considerably affected with wandering or stupor, and, in some instances, with complete apoplectic lethargy, from which it was impossible to arouse them until the paroxysm had entirely subsided, and the powers of the system again resumed their recuperative efforts. In a strongly marked case of this description, the disease appeared to be confined entirely to the nervous system, the pulse being regular, moderately strong, and not frequent or tense, but such as I have generally remarked in comatose affections, and which might be called the apoplectic pulse. These apoplectic symptoms continued to return for three or four days. Quinine was given freely in the intermissions, or during the recess of the apoplectic symptoms, and the man recovered.

The bowels were variously affected; costiveness seldom prevailed, and generally there was a disposition to watery stools. Nothing like black vomit was observed, nor was the disease of that aggravated character that I have frequently witnessed in the interior of the state. Only one death occurred under my observation, and that was a delicate young married woman, far advanced in pregnancy, who had been treated on the Thompsonian plan for several days before I saw her. The disease vented its violence, as is common in such cases, on the brain and nervous system, the faculties becoming gradually overpowered by and buried in lethargy and stupor.

In the treatment of this disease, I generally commenced with the exhibition of about fifteen grains of calomel in combination with four or five of ipecacuanha. The calomel was, in some instances, repeated two or three times, but was not relied upon as an essential remedy; and, indeed, in several instances, I succeeded equally well without the exhibition of a single grain.

Where the pulse would authorize it, the lancet was had recourse to with advantage; and in some cases the bleeding was repeated five or six times, but, in general, its free use was not required.

A remedy of leading utility was the cold-bath, or, where the fever was more moderate, sponging the body with lime juice and water, and the application of linen cloths, wet with cold water, to the head and stomach; these were repeated, according to the urgency of the symptoms. Where there was no disposition to watery stools, cream of tartar, in solution, was given as a drink; but if the bowels were in an irritable state, lemonade was substituted.

As a diaphoretic, I used the following with much benefit:

R. Nitrat. potass. ʒj., vin. antimon. ʒji., sp. nitros. ʒss., aq. font. ʒjss. Dosis. coch. parv. omne tertia hora.

Where it was necessary to control the action of the bowels, a drachm or two of paregoric was added to the above prescription. This preparation I prefer to the common nitrous powders prepared with calomel, as I have not unsfrequently found the latter to produce severe griping and dysenteric symptoms; it is well known that calomel itself will sometimes produce great irritation of the intestines. In one instance, I have known the greatest pain and agony produced by the operation of a single moderate dose of calomel, in a patient previously debilitated by disease; he was relieved by anodynes, but never recovered from its effects, the disease from that time gathering strength, and becoming irremediable.

In addition to what I have said on the subject of bilious colic, in relation to calomel, little need here be added. Where this article is fundamentally relied on, the practice is irrational, degenerates into empiricism, and is often the common cloak of ignorance and incompetence. When rightly administered, it is a valuable remedy, but it is still questionable whether, in the reckless manner it is often exhibited, the profession and the cause of health and humanity have not lost more than they have gained by its introduction into practice. In behalf of calomel, it has been said that there is no other medicine that possesses the power of arresting those liquid and watery discharges from the bowels which often occur in bilious fever as well as in pleurisy, scarlatina, inflammations of the lungs, &c. The favourite prescription is calomel, opium, and ipecacuanha, or calomel and Dover's powder. I know not what success has attended the practice of others in this particular, but, as far as my own experience extends, I think I am authorized in saying, that calomel possesses no such power, but rather aggravates the symptoms, for I have not unsfrequently observed that these discharges continue not only under the exhibition of this prescription, but even after the system has been thoroughly impregnated with the calomel, as indicated by the breath, the livid and swollen gums, the parched and inflamed fauces, and the crisp, red, smooth, and horny state of the tongue. And true it is, that I have known all these symptoms looked upon as parts and accompaniments of the original disease; and as only affording a stronger argument for the more vigorous prosecution of the medicine. In this way I have known an artificial disease produced and kept up by the daily exhibition of calomel, and because a flow of saliva has not been excited, it is taken for granted that the medicine has not exerted its specific

effect upon the system, or not been given in sufficient quantity; it is, therefore, pushed still further, and sloughing and mortification of the gunis, cheeks, and fauces, and death itself follow in the train of consequences. Let the young practitioner, therefore, be aware of this dangerous rock upon which so many lives have been prematurely lost. Once and again have I raised my voice against it, and although it may have excited the sneer of incredulity and of fool-hardy self-sufficiency and prejudice, may, perhaps, arrest the attention of more modest prudence and discretion. But it is said that, in desperate cases, salivation affords the only chance of recovery, and that all the melancholy consequences of salivation should be risked rather than lose the life of the patient. Were this position founded in truth, and were this the only alternative, the argument would be plausible, and, perhaps, just; but experience too surely proves, that in the more aggravated cases it is impossible to produce a salivation; that is, if the fever and excitement are too high, the sialagogue power of mercury is counteracted, or, if too low, the system is insensible to its influence. In other instances an artificial disease is produced, or the original symptoms more highly aggravated by the exhibition of calomel. Not long since, I was called to a distance to see a patient, in consultation with another physician. It was a case of bilious fever of some three or four weeks duration. The patient was exceedingly emaciated, and subject to daily returns or exacerbations of fever, which would come on about 10 o'clock, A. M., and continue until midnight, ending in profuse perspirations, so that the bedding seemed as if it had been drenched in a shower. The patient would then be left cold and pulseless for three or four hours, the eye, countenance, and intellect retaining their expression and intelligence, whilst every part of the body felt as if labouring under the cold damp of death. There was some redness and soreness of the fauces. The tongue was dry, smooth, and horny, and as red as crimson; the papillæ were obliterated, and the most pungent substances afforded no taste. The patient had been treated on the calomel plan; but, as salivation had not been excited, this remedy was still persisted in, and in augmented quantity, so that at the time I saw him, he was taking forty grains of calomel a day, together with the free use of nitric acid for the cure of a supposed hepatic affection. From all the circumstances, I unhesitatingly pronounced it a case of mercurial fever. The calomel and nitric acid were, of course, discontinued; quinine and other tonics were exhibited during the sweating stage and remission of the fever, and the diet regulated, so that in a few days he was able to take the exercise of a carriage, and in a short time perfectly recovered. This is only one of

the many instances of a similar kind that it has been my misfortune to witness; and if others have failed of like observation, it has not been owing to the want of subjects, but because their attention was differently directed. In the allusion to the above case, I have purposely avoided time, place, and names, so that no injury can possibly result to the attending physician, who was highly respected in his profession, and who is now the only person that would probably recognise the circumstance.

A few remarks will suffice in relation to the article of quinine. When the disease was marked with distinct intermissions, the pulse becoming soft and natural, the skin cool, and the head and epigastrium free from pain and uneasiness, this remedy might be given with advantage and success; but, under contrary states of the system, when the remission was imperfect, the pulse accelerated fifteen or twenty pulsations above its natural beat, although small, weak, and compressible; when little or no moisture had preceded or accompanied the remission; when any degree of restlessness or stupor existed, with a red and dry tongue; under such circumstances, quinine was, at best, a doubtful remedy. True, in some instances, it might succeed, particularly if a free perspiration was thereby excited; but yet, in a majority of cases it would fail, every symptom becoming aggravated under its exhibition. When circumstances authorized its use, I seldom found less than twenty grains sufficient to arrest the recurrence of the paroxysm. If the intermission was short, it became necessary to make the doses proportionably large, in order that the system might be speedily brought under the influence of its stimulating operation.

It may be proper to make a few remarks upon the subject of cathartics and emetics in this disease, and the same observations will be applicable to fever in general. And here I am free and willing to admit that the doctrine of Broussais, although, like other theorists, he may be too exclusive, and have carried his system to extremes, yet it has had this beneficial effect, that it has counteracted the dangerous and pernicious practice of the Hamiltonian school, against which I have uniformly protested since the year 1822. It is, however, much to be regretted, that so many physicians still pursue the old plan of purgation, in opposition to the plain demonstration of experience. I have known forty grains of calomel given at a dose to a patient who was scarcely able to rise without fainting, followed up by a liberal libation of castor oil. The consequence was that the liver and intestines were stimulated and goaded into increased action; the stools were mixed with large quantities of grumous and coagulated blood; the general system sympathizing in the local irritation, was

thrown into an augmented paroxysm of fever, which only subsided with the cessation in the operation of the cathartie. It is scarcely necessary to say that the event was disastrous. But, notwithstanding the exhaustion and the increased debility thereby occasioned, the green, sooty, and bilious appearance of the discharges convinces the physician, and is demonstration clear to the friends of the patient, that the practice was right, and that there was an urgent necessity for its employment, not reflecting that these morbid appearances in the excretions are the result of morbid action, and that the same appearance will be exhibited on the repetition of every cathartie, until death ensues or convalescence is established. A short time since, I saw a patient labouring under cholera morbus, vomiting and purging copiously a green watery fluid; now, according to the doctrine of purgation, here was a necessity for promoting the expulsion of this offending matter; but, whatever had been the exciting cause, the stomach and bowels, having assumed a diseased action, were still under the remote influence of the original impulse, although the offending cause had been removed. The stomach was highly irritable, and rejected, in a short time, all the fluids that had been swallowed, tinged with the same verdigris complexion. I exhibited a pill of opium and camphor, applied a mustard plaster to the region of the stomach, and interdicted all drinks for the space of three hours, and in this way he was speedily relieved.

But although severe and repeated purgation is highly prejudicial, it is still important that the bowels be kept regular and free; and for this purpose cream of tartar, or tamarind water will generally suffice; and it not unfrequently happens that even these simple drinks will run off too freely by the bowels, and require the exhibition of an anodyne. Sometimes a Seidlitz powder may be required. With the same view enemata may be frequently employed, without any risk of overaction and debility.

At one time, tartarized antimony, as an emetic, was considered as the *sine qua non* in commencing the treatment of bilious fever; and very plausible reasons were assigned in accounting for its beneficial powers and operation in this disease. But as the premises are untrue, the argument is inadmissible; and from sufficient experience I am authorized to assert that the exhibition to tartarized antimony, as an emetic in bilious fever, is the most dangerous practice that can be pursued. And when we hear and see asserted now many patients were suddenly relieved by the operation of this drug, we may rest assured that it is altogether an ex parte representation, carefully concealing the numerous instances of sudden death and inevitable col-

lapse its exhibition has occasioned. In many instances this article operates as a deadly poison, suddenly prostrating the powers of the system, without bringing into action either the stomach or intestines; in other instances no emesis is excited, but copious watery discharges from the bowels are occasioned, succeeded by a deathly palor, coldness and lividity of surface; the serosity of the blood, at the same time, exuding in a copious shower from the relaxed capillaries; and death suddenly ensues, as if the patient had been smitten with the fatal touch of the cholera.

The same objections do not apply to ipecacuanha, and I have frequently employed it in moderate doses of four or five grains in combination with calomel, at the commencement of the disease, and with good effect in breaking or weakening the chain of morbid actions. Unlike tartar emetic, I have not found it to increase the irritability of the stomach, or to aid in that protracted vomiting that is frequently caused by the antimonial preparation.

In conclusion I would remark, that there is considerable diversity in the fever of our different seasons, as also in different patients, and that it becomes necessary to modify the treatment according to the character of the disease and the nature of the prevailing epidemic.

Much has been said and written about yellow fever, but, in all my experience, it has never been my fortune to meet with an epidemic of that specific character; true, I have seen cases that might be and were called yellow fever, but not coming up to Dr. Pym's definition and distinctive characteristic of this disease. In short, I have seen no difference in our autumnal fevers but in degree and violence; in some the disease being slight and of short continuance, and in others, and especially in strangers, more aggravated, obstinate and malignant—coming up to the description of the causus of Hippocrates and Aretæus, or even the yellow fever, (*si placet,*) but, still arising from the same general causes, acting upon a stronger predisposition, and more vulnerable susceptibility. As well might it be contended that dew and rain, frost, hail and snow were not the same in their elementary composition, as that the diversified grades of our summer and autumnal fevers are not different modifications of the same disease. The appellation *yellow fever* is morally and physically wrong. The minds of the community are sufficiently sensitive to the reports of ordinary diseases, without harrowing up their fears by the alarm of this terrific misnomer, carrying dismay and destruction before it, and investing every indisposition with the terrors of approaching fate.

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